

## ABSTRACT

A digital image system is disclosed having a sensor with an elevated two-color photo-detector for sensing two different color values in combination with a single-color photo-detector for sensing a third color value. Minimal demosaicing is performed to obtain at least one luminance value at each photo-detector location. The sampled chrominance values and sampled and demosaiced luminance values are directly compressed without converting between color spaces and with minimal or no processing required. With a reduced amount of image processing prior to image compression, all of the pre-compression image processing may be performed on the image sensor itself instead of on a separate image processing system.

10010800-1 011002